

AMENDMENTS TO THE SPECIFICATION:

Please amend the caption on page 4, line 23, as follows:

BRIEF SUMMARY OF THE INVENTION

Please amend the paragraph beginning on page 4, line 24, and continuing to page page 21, line 10, as follows:

~~The invention has been made with the aim of solving these problems. An object of the invention is to provide:~~In a control method, in which identification information such as manufacturer identification information and model identification information of plural types is stored in advance into an apparatus to be controlled or an attached device, and w. When the specification or the like of the apparatus to be controlled is changed, identification information to be transmitted from the apparatus to be controlled to the controlling apparatus is changed, so that a specification change such as new connection of an attached device or a change in the firmware, or a change in the data to be received by the attached device or in its reception environment, can be treated easily without the necessity of a setup change in the controlling apparatus; an apparatus to be controlled using said method; and a control system provided with said apparatus.

~~An example aspect of the invention technology~~ is a control method of using a controlling apparatus for controlling an apparatus to be controlled on the basis of identification information for identifying the apparatus to be controlled, to control an apparatus to be controlled which transmits identification information to the controlling apparatus, the method being characterized in that the apparatus to be controlled changes the identification information to be transmitted when a specification is changed.

In the control method according to ~~the invention~~an example mode, when a controlling apparatus such as a personal computer controls an apparatus composed of a peripheral device connected to the controlling apparatus, identification information such as manufacturer identification information and model identification information of plural types is stored in advance into the apparatus to be controlled, so that the identification information transmitted from the apparatus to be controlled to the controlling apparatus is changed depending on a specification change such as a change in the connection situation of an attached device and a change in the firmware. This avoids the necessity of a setup change in the controlling apparatus such as the changing of an authentication method for the apparatus to be controlled, and allows the controlling apparatus to recognize the change in the specification of the apparatus to be controlled and select peripheral device controlling software corresponding to the changed specification. Accordingly, the change in the specification of the apparatus to be controlled can be easily treated.

An example aspect of the ~~invention-technology~~ is an apparatus to be controlled by an apparatus to which identification information for identifying the apparatus to be controlled is transmitted, the apparatus to be controlled being characterized by comprising: detecting means for detecting a change in a specification; and setting means for setting identification information to be transmitted, on the basis of the detected change in the specification.

In the apparatus to be controlled according to ~~the invention~~an example embodiment, when the apparatus to be controlled is connected to a controlling apparatus such as a personal computer, identification information changed in correspondence to a specification change such as a firmware change is set as identification information such as manufacturer identification information and model identification information which is to be transmitted to the controlling apparatus in order to establish the status of the object to be controlled. This avoids the necessity of a setup change in the controlling apparatus

to which the identification information such as the changing of an authentication method for the apparatus to be controlled is transmitted, and allows the controlling apparatus to recognize the change in the specification of the apparatus to be controlled and select peripheral device controlling software corresponding to the changed specification. Accordingly, the change in the specification of the apparatus to be controlled can be easily treated.

An aspect of the ~~invention-technology~~ is an apparatus to be controlled by an apparatus to which identification information for identifying the apparatus to be controlled is transmitted, the apparatus being characterized by comprising: connecting means for connecting another device; detecting means for detecting a change in the situation of connection of the device to the connecting means; and setting means for setting identification information to be transmitted, on the basis of the detected change in the situation of connection.

In the apparatus to be controlled ~~according to the invention~~, when the apparatus to be controlled is connected to a controlling apparatus such as a personal computer, identification information changed in correspondence to the connection situation of the connecting or disconnecting of an attached device such as an additional memory is set as identification information such as manufacturer identification information and model identification information which is to be transmitted to the controlling apparatus in order to establish the status of the object to be controlled. This avoids the necessity of a setup change in the controlling apparatus such as the changing of an authentication method for the apparatus to be controlled, and allows the controlling apparatus to recognize the change in the specification of the apparatus to be controlled having been caused by the change in the connection situation of the attached device and select peripheral device controlling software corresponding to the presence or absence of the attached device, so

as to control the apparatus to be controlled and the attached device. Accordingly, the connecting or disconnecting of the attached device can be easily treated.

An aspect of the ~~invention-technology~~ is an apparatus to be controlled characterized by further comprising acquiring means for acquiring identification information corresponding to the detected change, from the device connected to the connecting means, wherein the setting means sets the identification information acquired from the device, as identification information to be transmitted.

In the apparatus to be controlled ~~according to the invention~~, identification information is acquired from another device such as an attached device connected to the connecting means. This permits the setting in correspondence to the change of the identification information, even when the identification information corresponding to the attached device is not stored in the apparatus to be controlled. Thus, the connecting or disconnecting of even an attached device which was not expected in the stage of designing of the apparatus to be controlled can be easily treated.

An aspect of the ~~invention-technology~~ is an apparatus to be controlled characterized by further comprising: storage means for storing plural pieces of identification information; and extracting means for extracting identification information corresponding to the detected change, from the storage means, wherein the setting means sets the identification information extracted by the extracting means, as identification information to be transmitted.

In the apparatus to be controlled according to ~~the invention~~an example embodiment, identification information corresponding to various specifications is stored in advance into storage means such as a nonvolatile memory, so that identification information corresponding to the changed specification is extracted on the basis of the

detected change and set as identification information to be transmitted. This avoids the necessity of a setup change in the controlling apparatus to which the identification information such as the changing of an authentication method for the apparatus to be controlled is transmitted, and allows the controlling apparatus to recognize the change in the apparatus to be controlled and select peripheral device controlling software corresponding to the change. Accordingly, the change in the specification of the apparatus to be controlled can be easily treated.

An aspect of the ~~invention-technology~~ is a control system characterized by comprising: an apparatus to be controlled described above; and a controlling apparatus for controlling the apparatus to be controlled on the basis of the identification information.

In the control system according to the ~~invention~~ an example embodiment, identification information changed in correspondence to a specification change such as a firmware change of the apparatus to be controlled is set as identification information to be transmitted from the apparatus to be controlled to the controlling apparatus for controlling the apparatus to be controlled, on the basis of identification information for identifying the apparatus to be controlled. This avoids the necessity of a setup change in the controlling apparatus such as the changing of an authentication method for the apparatus to be controlled, and allows the controlling apparatus to recognize the change in the specification of the apparatus to be controlled and select peripheral device controlling software corresponding to the changed specification. Accordingly, the change in the specification of the apparatus to be controlled can be easily treated.

An aspect of the ~~invention-technology~~ is a control system characterized by comprising: the apparatus to be controlled described above; an attached device connected to the connecting means provided in the apparatus to be controlled; and a controlling

apparatus for controlling the apparatus to be controlled and the attached device on the basis of the identification information.

In the control system according to ~~the invention~~an example embodiment, identification information changed in correspondence to a change in the connection situation of the connecting or disconnecting of an attached device such as an additional memory is set as identification information to be transmitted from the apparatus to be controlled to the controlling apparatus for controlling the apparatus to be controlled, on the basis of identification information for identifying the apparatus to be controlled. This avoids the necessity of a setup change in the controlling apparatus such as the changing of an authentication method for the apparatus to be controlled, and allows the controlling apparatus to recognize the change in the specification of the apparatus to be controlled having been caused by the change in the connection situation of the attached device and select peripheral device controlling software corresponding to the presence or absence of the attached device, so as to control the apparatus to be controlled and the attached device. Accordingly, the connecting or disconnecting of the attached device can be easily treated.

An aspect of the ~~invention~~technology is a control system characterized in that: the attached device further comprises transmitting means for transmitting the identification information to the apparatus to be controlled; the apparatus to be controlled further comprises acquiring means for acquiring the identification information transmitted from the attached device; and the setting means sets the identification information acquired by the acquiring means, as identification information to be transmitted.

In the control system according to ~~the invention~~an example embodiment, identification information is stored in advance into the attached device, so that the apparatus to be controlled acquires the identification information from the attached

device and transmits the information to the controlling apparatus. This permits the setting of change of the identification information, even when the identification information corresponding to the attached device is not stored in the apparatus to be controlled. Thus, the connecting or disconnecting of even an attached device which was not expected in the stage of designing of the apparatus to be controlled can be easily treated.

An aspect of the ~~invention-technology~~ is a control system characterized in that the apparatus to be controlled further comprises: storage means for storing plural pieces of identification information; and extracting means for extracting identification information corresponding to the detected change, from the storage means, and the setting means sets the identification information extracted by the extracting means, as identification information to be transmitted.

In the control system according to ~~the invention~~an example embodiment, identification information corresponding to various specifications is stored in advance into storage means such as a nonvolatile memory provided in the apparatus to be controlled, so that the apparatus to be controlled extracts identification information corresponding to the changed specification from the storage means and sets the extracted identification information as identification information to be transmitted to the controlling apparatus. This avoids the necessity of a setup change in the controlling apparatus to which the identification information such as the changing of an authentication method for the apparatus to be controlled is transmitted, and allows the controlling apparatus to recognize the specification change in the apparatus to be controlled and select peripheral device controlling software corresponding to the changed specification. Accordingly, the change in the specification of the apparatus to be controlled can be easily treated.

An aspect of the ~~invention technology~~ is a control system characterized by comprising: at least one controlling apparatus for controlling an apparatus to be controlled, on the basis of identification information for identifying the apparatus to be controlled; and a plurality of apparatuses to be controlled which transmits identification information to the controlling apparatus, wherein the first apparatus to be controlled includes: means which stores first identification information for identifying the first apparatus to be controlled and second identification information for identifying the second apparatus to be controlled; means for connecting the second apparatus to be controlled; means for detecting the connection of the second apparatus to be controlled to the connecting means; means for extracting the stored first and second identification information on the basis of the detected connection of the second apparatus to be controlled; means for setting the extracted first identification information as identification information to be transmitted to the controlling apparatus; and means for transmitting the extracted second identification information to the second apparatus to be controlled, the second apparatus to be controlled includes: means for setting the second identification information received from the first apparatus to be controlled, as identification information to be transmitted to the controlling apparatus, and the controlling apparatus includes: means for controlling the first apparatus to be controlled on the basis of the first identification information; and means for controlling the second apparatus to be controlled on the basis of the second identification information.

In the control system according to ~~the invention~~an example embodiment, when a plurality of apparatuses to be controlled is used, the first apparatus to be controlled stores also the second identification information for identifying the second apparatus to be controlled. This allows the system to adjust easily to various changes in system configuration. In addition, when a plurality of controlling apparatuses is used, the system configuration can be diversified.

An aspect of the ~~invention~~technology is a control system comprising: a controlling apparatus for controlling an apparatus to be controlled, on the basis of identification information for identifying the apparatus to be controlled; and an apparatus to be controlled which transmits identification information to the controlling apparatus, the system being characterized by further comprising an attached device, which is connected to the apparatus to be controlled, for receiving data and transmitting information concerning the received data to the apparatus to be controlled, wherein the apparatus to be controlled includes: acquiring means for acquiring the information concerning the received data from the attached device; and setting means for setting identification information to be transmitted to the controlling apparatus, on the basis of the information acquired by the acquiring means.

In the control system according to the ~~invention~~technology ~~an example embodiment~~, identification information corresponding to a change in information concerning reception data such as the channel of broadcasting data to be received by an attached device such as a tuner is set as identification information to be transmitted from the apparatus to be controlled to the controlling apparatus for controlling the apparatus to be controlled, on the basis of identification information for identifying the apparatus to be controlled. This avoids the necessity of a setup change in the controlling apparatus such as the changing of an authentication method for the apparatus to be controlled, and allows the controlling apparatus to recognize the change in the apparatus to be controlled having been caused by the change of the reception channel or the like and select peripheral device controlling software corresponding to the change in the apparatus to be controlled, so as to control the apparatus to be controlled and the attached device. Accordingly, a change in the reception channel or the like of an attached device such as a tuner can be easily treated.

An aspect of the ~~invention~~technology is a control system characterized in that the attached device includes: receiving means for receiving data; and extracting means for

extracting information concerning the data, from the data received by the receiving means, whereby the information extracted by the extracting means is transmitted to the apparatus to be controlled.

In the control system according to ~~the invention~~an example embodiment, information concerning the received data such as channel identification information is extracted from the data received by the attached device such as a tuner, and the extracted information is transmitted to the apparatus to be controlled. This allows the apparatus to be controlled to set the identification information to be transmitted to the controlling apparatus, on the basis of the information concerning the data received by the attached device.

An aspect of the ~~invention~~technology is a control system comprising: a controlling apparatus for controlling an apparatus to be controlled, on the basis of identification information for identifying the apparatus to be controlled; and an apparatus to be controlled which transmits identification information to the controlling apparatus, the system being characterized by further comprising an attached device, which is connected to the apparatus to be controlled, for transmitting identification information to the apparatus to be controlled, wherein the apparatus to be controlled includes: acquiring means for acquiring the identification information transmitted from the attached device; and setting means for setting the identification information acquired by the acquiring means, as identification information to be transmitted to the controlling apparatus.

In the control system according to ~~the invention~~an example embodiment, identification information is stored in advance into the attached device, so that the apparatus to be controlled acquires the identification information transmitted from the attached device and transmits the information to the controlling apparatus. This permits the changing of the identification information to be transmitted to the controlling

apparatus, even when the identification information corresponding to the attached device is not stored in the apparatus to be controlled. Thus, a change can be easily treated such as in the reception channel or the reception environment of an attached device such as a tuner, which was not expected in the stage of designing of the apparatus to be controlled.

An aspect of the ~~invention~~technology is a control system characterized in that the attached device includes: receiving means for receiving data; extracting means for extracting information concerning the data, from the data received by the receiving means; and setting means for setting identification information to be transmitted to the apparatus to be controlled, on the basis of the information extracted by the extracting means, whereby the identification information having been set by the setting means is transmitted to the apparatus to be controlled.

In the control system according to ~~the invention~~an example embodiment, information concerning the received data such as channel identification information is extracted from the data received by the attached device such as a tuner, identification information is set on the basis of the extracted information, and the identification information having been set is transmitted from the attached device to the apparatus to be controlled. This allows the apparatus to be controlled to set the identification information transmitted from the attached device, as the identification information to be transmitted to the controlling apparatus.

An aspect of the ~~invention~~technology is a control system characterized in that the attached device includes: receiving means for receiving data; and setting means for setting identification information to be transmitted to the apparatus to be controlled, on the basis of the reception environment of the data, whereby the identification information having been set by the setting means is transmitted to the apparatus to be controlled.

In the control system according to ~~the invention~~an example embodiment, a reception environment such as a reception area is specified on the basis of the broadcasting data received by the attached device such as a tuner, identification information is set on the basis of the specified reception environment, and the identification information having been set is transmitted to the apparatus to be controlled. This allows the apparatus to be controlled to set the identification information transmitted from the attached device, as the identification information to be transmitted to the controlling apparatus.

An aspect of the ~~invention~~technology is a control system comprising: a controlling apparatus for controlling an apparatus to be controlled, on the basis of identification information for identifying the apparatus to be controlled; and an apparatus to be controlled which transmits identification information to the controlling apparatus, the system being characterized by further comprising: an attached device, which is connected to the apparatus to be controlled, for receiving data and transmitting information concerning the reception environment of the data to the apparatus to be controlled, wherein the apparatus to be controlled includes: acquiring means for acquiring the information concerning the reception environment from the attached device; and setting means for setting identification information to be transmitted to the controlling apparatus, on the basis of the information acquired by the acquiring means.

In the control system according to ~~the invention~~an example embodiment, identification information corresponding to a change in the reception environment such as a reception area of the attached device such as a tuner for receiving the broadcasting data is set as identification information to be transmitted from the apparatus to be controlled to the controlling apparatus for controlling the apparatus to be controlled, on the basis of identification information for identifying the apparatus to be controlled. This avoids the necessity of a setup change in the controlling apparatus such as the changing

of an authentication method for the apparatus to be controlled, and allows the controlling apparatus to recognize the change in the apparatus to be controlled having been caused by the change of the reception or the like of the attached device and select peripheral device controlling software corresponding to the change in the apparatus to be controlled, so as to control the apparatus to be controlled and the attached device. Accordingly, a change in the reception environment of an attached device such as a tuner can be easily treated.

In the control method, the apparatus to be controlled and the control system according to the invention technology, in which the controlling apparatus such as a personal computer controls the apparatus to be controlled on the basis of the information such as the manufacturer identification information and the model identification information transmitted from the apparatus to be controlled serving as a peripheral device connected to the controlling apparatus, identification information of plural types is stored in advance into the apparatus to be controlled, so that the setting of the identification information transmitted from the apparatus to be controlled to the controlling apparatus is changed depending on a specification change such as a change in the connection situation of an attached device (for example, the connecting of an additional memory) or a change in the firmware, or a change in the data to be received by the attached device or in data reception environment. This avoids the necessity of a setup change in the controlling apparatus such as the changing of an authentication method for the apparatus to be controlled, and allows the controlling apparatus to recognize the change in the specification of the apparatus to be controlled and select peripheral device controlling software corresponding to the changed specification and the like. Thus, the change in the specification and the like of the apparatus to be controlled can be easily treated.

The above and further objects and features of the invention technology will more fully be apparent from the following detailed description with accompanying drawings.

Please amend the paragraphs beginning on page 21, line 14, and continuing to page 22, line 16, as follows:

FIG. 1 is a block diagram showing the configuration of a control system according to a first example embodiment of the invention;

FIG. 2 is a flowchart showing the procedure of initial setting in a controlling apparatus and an apparatus to be controlled used in a control system according to a the first example embodiment of the invention;

FIG. 3 is a flowchart showing the procedure of changing identification information in an apparatus to be controlled used in a control system according to a the first example embodiment of the invention;

FIG. 4 is a block diagram showing the configuration of a control system according to a second example embodiment of the invention;

FIGS. 5A and 5B are flowcharts showing the procedure of changing identification information in an apparatus to be controlled and an attached device used in a control system according to a the second example embodiment of the invention;

FIG. 6 is a block diagram showing the configuration of a control system according to a third example embodiment of the invention;

FIGS. 7A to 7C are flowcharts showing the procedure of initial setting in a controlling apparatus, a first apparatus to be controlled and a second apparatus to be controlled used in a control system according to a the third example embodiment of the invention;

FIGS. 8A and 8B are flowcharts showing the procedure of changing identification information in a first apparatus to be controlled and a second apparatus to be controlled used in a control system according to a ~~the third example embodiment of the invention;~~

FIG. 9 is a block diagram showing another configuration of a control system according to a ~~the third example embodiment of the invention;~~ and

FIG. 10 is a block diagram showing the configuration of a control system according to a fourth ~~example embodiment of the invention.~~

Please amend the caption on page 22, line 18, as follows:

DETAILED DESCRIPTION ~~OF THE INVENTION~~

Please amend the paragraph beginning on page 22, line 23, and continuing to page 22, line 24, as follows:

FIG. 1 is a block diagram showing the configuration of a control system according to a first ~~example embodiment of the invention.~~

Please amend the paragraph beginning on page 25, line 2, and continuing to page 25, line 4, as follows:

The apparatus to be controlled 20 ~~according to the invention~~ stores plural types of identification information so as to adjust to various changes in the specification.

Please amend the paragraph beginning on page 25, line 11, and continuing to page 25, line 14, as follows:

FIG. 2 is a flowchart showing the procedure of initial setting in the controlling apparatus 10 and the apparatus to be controlled 20 used in the control system according to the first embodiment of the invention.

Please amend the paragraph beginning on page 27, line 10, and continuing to page 27, line 13, as follows:

FIG. 3 is a flowchart showing the procedure of changing identification information in the apparatus to be controlled 20 used in the control system according to the first example embodiment of the invention.

Please amend the paragraph beginning on page 31, line 21, and continuing to page 31, line 24, as follows:

FIGS. 5A and 5B are flowcharts showing the procedure of changing identification information in the apparatus to be controlled 20 and the attached device 30 used in the control system according to the second example embodiment of the invention.

Please amend the paragraph beginning on page 34, line 23, and continuing to page 34, line 24, as follows:

FIG. 6 is a block diagram showing the configuration of a control system according to the third example embodiment of the invention

Please amend the paragraph beginning on page 37, line 25, and continuing to page 38, line 4, as follows:

FIGS. 7A to 7C are flowcharts showing the procedure of initial setting in the controlling apparatus 10, the first apparatus to be controlled 20a and the second apparatus to be controlled 20b used in the control system according to the third example embodiment of the invention.

Please amend the paragraph beginning on page 40, line 5, and continuing to page 40, line 9, as follows:

FIGS. 8A and 8B are flowcharts showing the procedure of changing identification information in the first apparatus to be controlled 20a and the second apparatus to be controlled 20b used in the control system according to the third example embodiment of the invention.

Please amend the paragraph beginning on page 44, line 16, and continuing to page 44, line 17, as follows:

FIG. 9 is a block diagram showing another configuration of a control system according to the third example embodiment of the invention.

Please amend the paragraph beginning on page 46, line 22, and continuing to page 446, line 23, as follows:

FIG. 10 is a block diagram showing the configuration of a control system according to the fourth example embodiment of the invention.